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Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln Ser 65 70 75 80

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Asp Thr Asn Val Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys 165 170 175

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Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn 195 200 205

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PCT/US2002/041372

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WO 2004/003211
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Val Thr Asp Ala Phe Asp Ile
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Gly Gly Thr Phe Ser Ser Tyr Ala Ile Ser
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Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
Gln Gly
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<210> 71 <211> 375 <212> DNA <213> Human <400> 71

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tca Ser	gtg Val	aag Lys	gtc Val 20	Ser	tgc Cys	aag Lys	gct Ala	tct Ser 25	gga Gly	ggc	acc Thr	ttc Phe	agc Ser 30	agc Ser	tat Tyr	96
gct Ala	atc Ile	agc Ser 35	tgg Trp	gtg Val	cga Arg	cag Gln	gcc Ala 40	cct Pro	gga Gly	caa Gln	61 y 999	ctt Leu 45	gag Glu	tgg Trp	atg Met	144
gga Gly	999 Gly 50	atc Ile	atc Ile	cct Pro	atc Ile	ttt Phe 55	ggt Gly	aca Thr	gca Ala	aac Asn	tac Tyr 60	gca Ala	cag Gln	aag Lys	ttc Phe	192
cag Gln 65	ggc Gly	aga Arg	gtc Val	act Thr	ttt Phe 70	acc Thr	gcg Ala	gac Asp	aaa Lys	tcc Ser 75	acg Thr	agt Ser	aca Thr	gcc Ala	tat Tyr 80	240
atg Met	gag Glu	ttg Leu	agg Arg	agc Ser 85	ctg Leu	aga Arg	tct Ser	gac Asp	gac Asp 90	acg Thr	gcc Ala	gtg Val	tat Tyr	tac Tyr 95	tgt Cys	288
gcg Ala	aga Arg	gga Gly	tac Tyr 100	gat Asp	tac Tyr	tat Tyr	gat Asp	agt Ser 105	agt Ser	ggc Gly	gtg Val	gct Ala	tcc Ser 110	ccc Pro	ttt Phe	336
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<210> 72

<211> 125

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<213> Human

<400> 72

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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe

Gln Gly Arg Val Thr Phe Thr Ala Asp Lys Ser Thr Ser Thr Ala Tyr

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90

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Ala Arg Gly Tyr Asp Tyr Tyr Asp Ser Ser Gly Val Ala Ser Pro Phe 100 105 110

Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser 115 120 125

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				5					10		_			15		

agg	gtc	acc	atc	tct	tgt	tct	gga	agc	acc	tcc	aac	atc	aat	act	aat	96
Arg	Val	Thr	Ile	Ser	Cys	Ser	Gly	Ser	Thr	Ser	Asn	Ile	Glv	Thr	Asn	20
			20				_	25					30			

act gca a	ac tgg	ttc	cag	cag	ctc	cca	gga	acg	gcc	CCC	aaa	ctc	ctc	144
Thr Ala A	Asn Trp	Phe	Gln	Gln	Leu	Pro	Gly	Thr	Ala	Pro	Lys	Leu	Leu	
	35				40		_			45	•			

atc cac aat aat	aat cag cgg co	ce tea ggg gte eet	gac cga ttc tct 192
ite His Ash Ash	Asn Gin Arg Pr	co Ser Gly Val Pro	Asp Arg Phe Ser
50	55	60	-

ggc	tcc	aag	tct	ggc	acc	tca	gcc	tcc	ctg	gcc	atc	agt	ggg	ctc	cag	240
Gly	Set	пÀг	ser	GTA	Thr	ser	Ата	ser	ьeu	Ala	Ile	Ser	Gly	Leu	Gln	
65					70					75					80	

tct	gag	gat	gag	gct	gat	tat	tac	tgt	gca	qca	taa	gat	gac	age	ctg	288
Ser	Glu	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Ăla	Ăla	Trp	Asp	Asp	Ser	Leu	200
				85	_	_	_	-	90		-	- 1.		95		

aat Asn	ggc Gly	cat His	tgg Trp	gtg Val	ttc Phe	ggc Gly	gga Gly	999 Gly	acc Thr	aag Lys	ctg Leu	acc Thr	gtc Val	ctg Leu	333
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<400> 74

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Thr Ala Asn Trp Phe Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile His Asn Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

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Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Gly His Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

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tcc Ser	ctg Leu	aga Arg	ctc Leu 20	tcc Ser	tgt Cys	gca Ala	gcc Ala	tct Ser 25	gga Gly	ttc Phe	acc Thr	ttc Phe	agt Ser 30	agc Ser	tat Tyr	96	
agc Ser	atg Met	aac Asn 35	tgg Trp	gtc Val	cgc Arg	cag Gln	gct Ala 40	cca Pro	gly aaa	aag Lys	gly aaa	ctg Leu 45	gag Glu	tgg Trp	gtc Val	144	
tca Ser	tcc Ser 50	att Ile	agt Ser	agt Ser	agt Ser	agt Ser 55	agt Ser	tac Tyr	ata Ile	tac Tyr	tac Tyr 60	gca Ala	gac Asp	tca Ser	gtg Val	192	
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gcg Ala	aga Arg	gtc Val	aca Thr 100	gat Asp	gct Ala	ttt Phe	Asp	atc Ile 105	tgg Trp	ggc Gly	caa Gln	gly aaa	aca Thr 110	atg Met	gtc Val	336	
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20 25 30

Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 40 45

Ser Ser Ile Ser Ser Ser Ser Tyr Ile Tyr Tyr Ala Asp Ser Val

50 . 55 . 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
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Ala Arg Val Thr Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val 100 105 110

Thr Val Ser Ser 115

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gaa aga gcc acc ctc tcc tgc agg gcc agt cag agt gtt agc agc tac 96
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
20 25 30

tta gcc tgg tac caa cag aaa cct ggc cag gct ccc agg ctc ctc atc
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
35 40 45

tat gat tca tcc aac agg gcc act ggc atc cca gcc aga ttc agt ggc 192
Tyr Asp Ser Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

agt ggg tct ggg aca gac ttc act ctc acc atc agc agc cta gag cct 240 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro 65 70 75 80

gaa gat ttt gca act tat tac tgt cta cag cat aac act ttt cct ccg 288 Glu Asp Phe Ala Thr Tyr Cys Leu Gln His Asn Thr Phe Pro Pro

acg ttc ggc caa ggg acc aag gtg gaa atc aaa
Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys

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<213> Human

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Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile

35 40 45

Tyr Asp Ser Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Thr Phe Pro Pro 85 90 95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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<210> 79

<211> 348

<212> DNA

<213> Human

<400> 79

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

agc atg aac tgg gtc cgc cag gct cca ggg aag ggg ctg gag tgg gtc
Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

tca tcc att agt agt agt agt tac ata tac tac gca gac tca gtg
Ser Ser Ile Ser Ser Ser Ser Ser Tyr Ile Tyr Tyr Ala Asp Ser Val
50 55 60

aag ggc cga ttc acc atc tcc aga gac aac gcc aag aac tca ctg tat
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65 70 75 80

ctg caa atg aac agc ctg aga gcc gag gac acg gct gtg tat tac tgt
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85
90
95

gcg aga gtc aca gat gct ttt gat atc tgg ggc caa ggg aca atg gtc
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acc gtc tca agc
Thr Val Ser Ser
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5 10 15

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gac Asp	ctt Leu	gto Val 35	Ser	tgg Trp	g tac Tyr	caa Gln	cac Glr 40	His	cca Pro	ggo Gly	c caa / Gln	gca Ala 45	Pro	aaa Lys	ctc Leu	144
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cag Gln	gct Ala	gag Glu	gac Asp	gag Glu 85	Ala	gat Asp	tat Tyr	tac Tyr	tgc Cys 90	aac Asn	tca Ser	tat Tyr	gta Val	agc Ser 95	Ser	288
agg Arg	ttt Phe	tat Tyr	gtc Val 100	ttc Phe	gga Gly	act Thr	61 y 393	acc Thr 105	aag Lys	gtc Val	acc Thr	gtc Val	cta Leu 110			330
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Ser	Ile	Thr	Ile 20	Ser	Cys	Ala	Gly	Thr 25	Thr	Thr	Asp	Leu	Thr 30	Tyr	Tyr	
Asp	Leu	Val 35	Ser	Trp	Tyr	Gln	Gln 40	His	Pro	Gly	Gln	Ala 45	Pro	Lys	Leu	
Val	Ile 50	Tyr	Asp	Gly	Asn	Lys 55	Arg	Pro	Ser	Gly	Val 60	Ser	Asn	Arg	Phe	
Ser 65	Gly	Ser	Lys	Ser	Gly 70	Asn	Thr	Ala	Ser	Leu 75	Thr	Ile	Ser	Gly	Leu 80	
Gln :	Ala	Glu	Asp	Glu 85	Ala	Asp	Tyr	Tyr	Cys 90	Asn	Ser	Tyr	Val	Ser 95	Ser	
Arg :	Phe	Tyr	Val 100	Phe	Gly	Thr	Gly	Thr 105	Lys	Val	Thr	Val	Leu 110			
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WO 2004/003211 PCT/US2002/041372 tee etg aga ete tee tgt gea gee tet gga tte ace tte agt age tat Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr agc atg aac tgg gtc cgc cag gct cca ggg aag ggg ctg gag tgg gtc 144 Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val tca tcc att agt agt agt agt tac ata tac tac gca gac tca gtg 192 Ser Ser Ile Ser Ser Ser Ser Tyr Ile Tyr Tyr Ala Asp Ser Val aag ggc cga ttc acc atc tcc aga gac aac gcc aag gac tca ctg tat 240 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asp Ser Leu Tyr 75 ctg caa atg aac agc ctg aga gcc gag gac acg gct gtg tat tac tgt 288 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 90 gcg aga gtc aca gat gct ttt gat atc tgg ggc caa ggg aca atg gtc 336 Ala Arg Val Thr Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val acc gtc tca agc 348 Thr Val Ser Ser 115 <210> 83 <211> 116 <212> PRT <213> Human <400> 83 Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr Ser Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Ser Ile Ser Ser Ser Ser Tyr Ile Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asp Ser Leu Tyr 70 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Val Thr Asp Ala Phe Asp Ile Trp Gly Gln Gly Thr Met Val 105 Thr Val Ser Ser 115 <210> 84

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<211> 321 <212> DNA <213> Human

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gac Asp	aga Arg	gtc Val	acc Thr 20	atc Ile	act Thr	tgt Cys	cgg Arg	gcg Ala 25	agt Ser	cag Gln	ggt Gly	att Ile	agt Ser 30	agt Ser	cgg Arg	96
tta Leu	gcc Ala	tgg Trp 35	tat Tyr	cag Gln	cag Gln	aaa Lys	cca Pro 40	G1y 999	aaa Lys	gcc Ala	cct Pro	aag Lys 45	ctc Leu	ctg Leu	atc Ile	144
tat Tyr	gct Ala 50	gca Ala	tcc Ser	agt Ser	ttg Leu	caa Gln 55	act Thr	61 ^y 888	gtc Val	cca Pro	tca Ser 60	agg Arg	ttc Phe	agc Ser	ggc	192
agt Ser 65	gga Gly	tct Ser	999 999	aca Thr	gat Asp 70	ttc Phe	act Thr	ctc Leu	act Thr	atc Ile 75	agc Ser	agc Ser	ctg Leu	cag Gln	cct Pro 80	240
gaa Glu	gat Asp	ttt Phe	gca Ala	act Thr 85	tac Tyr	tat Tyr	tgt Cys	caa Gln	cag Gln 90	gct Ala	aac Asn	agg Arg	ttc Phe	cct Pro 95	ccg Pro	288
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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Arg 20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile 35 40 45

Tyr Ala Ala Ser Ser Leu Gln Thr Gly Val Pro Ser Arg Phe Ser Gly 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro 65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Arg Phe Pro Pro 85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys 100 105

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act Thr	gat Asp	gta Val 35	cat His	tgg Trp	tac Tyr	caa Gln	cac His 40	ctt Leu	cca Pro	gga Gly	aca Thr	Ala	ccc Pro	aga Arg	ctc Leu	144
ctc Leu	att Ile 50	cat His	gga Gly	gac Asp	agt Ser	aat Asn 55	cgg Arg	ccc Pro	tcc Ser	gly ggg	gtc Val 60	cct Pro	gac Asp	cga Arg	ttc Phe	192
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cgg Arg	gtt Val	gag Glu	gat Asp	gag Glu 85	gct Ala	gat Asp	tat Tyr	tac Tyr	tgt Cys 90	cag Gln	tcg Ser	tat Tyr	gac Asp	tat Tyr 95	ggc Gly	288
ctg Leu	aga Arg	GIY	tgg Trp 100	gtg Val	ttc Phe	ggc Gly	ggc	999 Gly 905	acc Thr	aag Lys	ctg Leu	Thr	gtc Val 110	ctt Leu		333
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<211> 111

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<400> 87

Gln Ser Val Val Thr Gln Pro Pro Ser Val Ser Gly Ala Pro Gly Gln

Arg Val Thr Ile Ser Cys Thr Gly Ser His Ser Asn Phe Gly Ala Gly

Thr Asp Val His Trp Tyr Gln His Leu Pro Gly Thr Ala Pro Arg Leu

Leu Ile His Gly Asp Ser Asn Arg Pro Ser Gly Val Pro Asp Arg Phe

Ser Gly Ser Arg Ser Gly Thr Ser Ala Ser Leu Ala Ile Thr Gly Leu

Arg Val Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Tyr Gly

Leu Arg Gly Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu

<210> 88

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tta Leu	aat Asn	tgg Trp 35	tat Tyr	caa Gln	cag Gln	aaa Lys	cca Pro 40	gga Gly	aaa Lys	gcc Ala	cct Pro	aag Lys 45	ctc Leu	ctg Leu	atc Ile	144
tat Tyr	gct Ala 50	gcc Ala	tcc Ser	act Thr	ttg Leu	caa Gln 55	agt Ser	G1y 999	gtc Val	cca Pro	tca Ser 60	agg Arg	ttc Phe	agt Ser	ggc Gly	192
agt Ser 65	gga Gly	tct Ser	gjà aaa	aca Thr	gat Asp 70	ttc Phe	act Thr	ctc Leu	acc Thr	atc Ile 75	acc Thr	agc Ser	cta Leu	cag Gln	cct Pro 80	240
gaa Glu	gat Asp	tct Ser	gca Ala	act Thr 85	tat Tyr	tac Tyr	tgc Cys	caa Gln	cag Gln 90	tat Tyr	tcc Ser	cgt Arg	tat Tyr	cct Pro 95	ccc Pro	288
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<210> 89

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Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asn Ile Asn Asn Tyr 20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile 35 40 45

Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Thr Ser Leu Gln Pro 65 70 75 80

Glu Asp Ser Ala Thr Tyr Tyr Cys Gln Gln Tyr Ser Arg Tyr Pro Pro
85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Thr

<210> 90

<211> 330

<212> DNA

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tcg Ser	atc Ile	acc Thr	ctc Leu 20	tcc Ser	tgc Cys	acc Thr	ggc	tcc Ser 25	agc Ser	act Thr	gat Asp	gtg Val	ggt Gly 30	aat Asn	tat Tyr	96
aac Asn	tat Tyr	atc Ile 35	tcc Ser	tgg Trp	tac Tyr	caa Gln	caa Gln 40	cac His	cca Pro	ggc Gly	caa Gln	gcc Ala 45	ccc Pro	aaa Lys	ctc Leu	144
ttg Leu	att Ile 50	tac Tyr	gat Asp	gtc Val	act Thr	agt Ser 55	cgg Arg	ccc Pro	tca Ser	ggt Gly	gtt Val 60	tct Ser	gat Asp	cgc Arg	ttc Phe	192
tct Ser 65	ggc Gly	tcc Ser	aag Lys	tca Ser	ggc Gly 70	ctc Leu	acg Thr	gcc Ala	tcc Ser	ctg Leu 75	acc Thr	atc Ile	tct Ser	gga Gly	ctc Leu 80	240
cag Gln	cct Pro	gaa Glu	gac Asp	gag Glu 85	gct Ala	gac Asp	tat Tyr	tac Tyr	tgc Cys 90	aac Asn	tcc Ser	tat Tyr	tct Ser	gcc Ala 95	acc Thr	288
gac Asp	act Thr	ctt Leu	gtt Val 100	ttt Phe	ggc Gly	gga Gly	GIY	acc Thr 105	aag Lys	ctg Leu	acc Thr	gtc Val	cta Leu 110			330

<210> 91

<211> 110

<212> PRT

<213> Human

<400> 91

Gln Ser Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Arg Gly Gln
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Ser Ile Thr Leu Ser Cys Thr Gly Ser Ser Thr Asp Val Gly Asn Tyr 20 25 30

Asn Tyr Ile Ser Trp Tyr Gln Gln His Pro Gly Gln Ala Pro Lys Leu

Leu Ile Tyr Asp Val Thr Ser Arg Pro Ser Gly Val Ser Asp Arg Phe
50 55 60

Ser Gly Ser Lys Ser Gly Leu Thr Ala Ser Leu Thr Ile Ser Gly Leu 65 70 75 80

Gln Pro Glu Asp Glu Ala Asp Tyr Tyr Cys Asn Ser Tyr Ser Ala Thr 85 90 95

Asp Thr Leu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 92

<211> 333

<212> DNA

cag Gln	gct Ala	gtg Val	ctg Leu	act Thr 5	cag Gln	ccg Pro	tcc Ser	tca Ser	gtg Val 10	tct Ser	gly aaa	gcc Ala	cca Pro	gga Gly 15	cag Gln	48
agg Arg	gtc Val	acc Thr	atc Ile 20	tcc Ser	tgc Cys	act Thr	gjå aaa	caa Gln 25	agc Ser	tcc Ser	aat Asn	atc Ile	30 Gly 39	gca Ala	gat Asp	96
tat Tyr	gat Asp	gta Val 35	cat His	tgg Trp	tac Tyr	cag Gln	caa Gln 40	ttt Phe	cca Pro	gga Gly	aca Thr	gcc Ala 45	ccc Pro	aaa Lys	ctc Leu	144
ctc Leu	atc Ile 50	tat Tyr	ggt Gly	cac His	aac Asn	aat Asn 55	cgg Arg	ccc Pro	tca Ser	gly aaa	gtc Val 60	cct Pro	gac Asp	cga Arg	ttc Phe	192
tct Ser 65	ggc Gly	tcc Ser	aag Lys	tct Ser	ggc Gly 70	acc Thr	tca Ser	gtc Val	tcc Ser	ctg Leu 75	gtc Val	atc Ile	agt Ser	gly aaa	ctc Leu 80	240
cag Gln	gct Ala	gag Glu	gat Asp	gag Glu 85	gct Ala	gat Asp	tat Tyr	tat Tyr	tgc Cys 90	cag Gln	tcc Ser	tat Tyr	gac Asp	agc Ser 95	agt Ser	288
cta Leu	agt Ser	ggt Gly	ttg Leu 100	gta Val	ttc Phe	ggc Gly	gga Gly	999 Gly 105	acc Thr	aag Lys	gtg Val	acc Thr	gtc Val 110	cta Leu		333

<210> 93

<211> 111

<212> PRT

<213> Human

<400> 93

Gln Ala Val Leu Thr Gln Pro Ser Ser Val Ser Gly Ala Pro Gly Gln 5 10 15

Arg Val Thr Ile Ser Cys Thr Gly Gln Ser Ser Asn Ile Gly Ala Asp

Tyr Asp Val His Trp Tyr Gln Gln Phe Pro Gly Thr Ala Pro Lys Leu 35 40 45

Leu Ile Tyr Gly His Asn Asn Arg Pro Ser Gly Val Pro Asp Arg Phe 50 55 60

Ser Gly Ser Lys Ser Gly Thr Ser Val Ser Leu Val Ile Ser Gly Leu 65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Ser Ser 85 90 95

Leu Ser Gly Leu Val Phe Gly Gly Gly Thr Lys Val Thr Val Leu 100 105 110

<210> 94

<211> 321

<212> DNA

gac Asp	atc Ile	cag Gln	ttg Leu	acc Thr 5	GIn	tct Ser	cca Pro	tct Ser	tct Ser 10	gtg Val	tct Ser	gca Ala	tct Ser	gtt Val 15	gga Gly	48
gac Asp	agc Ser	gtc Val	acc Thr 20	atc Ile	act Thr	tgt Cys	cgg Arg	gcg Ala 25	agt Ser	cag Gln	gat Asp	att Ile	agc Ser 30	agc Ser	tgg Trp	96
tta Leu	gcc Ala	tgg Trp 35	tat Tyr	caa Gln	cag Gln	aaa Lys	cca Pro 40	G1y 999	gag Glu	gcc Ala	cct Pro	aag Lys 45	ctc Leu	ctg Leu	atc Ile	144
tat Tyr	gct Ala 50	gca Ala	tcc Ser	ctt Leu	ctt Leu	caa Gln 55	agt Ser	gjå aaa	gtc Val	cca Pro	tca Ser 60	cgg Arg	ttc Phe	agc Ser	ggc Gly	192
agt Ser 65	gga Gly	tct Ser	gjå aaa	aca Thr	gat Asp 70	ttc Phe	gct Ala	ctc Leu	act Thr	atc Ile 75	aac Asn	agc Ser	ctg Leu	cag Gln	cct Pro 80	240
gaa Glu	gat Asp	ttt Phe	gca Ala	act Thr 85	tac Tyr	ttt Phe	tgt Cys	caa Gln	cag Gln 90	gct Ala	gac Asp	agt Ser	ttc Phe	cct Pro 95	ccc Pro	288
acc Thr	ttc Phe	ggc Gly	caa Gln 100	GJA 888	aca Thr	cgg Arg	ctg Leu	gag Glu 105	att Ile	aaa Lys						321

<210> 95

<211> 107

<212> PRT

<213> Human

<400> 95

Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly 5 10 15

Asp Ser Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Ser Trp 20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Glu Ala Pro Lys Leu Leu Ile 35 40 45

Tyr Ala Ala Ser Leu Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly 50 55 60

Ser Gly Ser Gly Thr Asp Phe Ala Leu Thr Ile Asn Ser Leu Gln Pro 65 70 75 80

Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Ala Asp Ser Phe Pro Pro 85 90 95

Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys 100 105

<210> 96

<211> 321

<212> DNA

gac Asp	atc Ile	gag Glu	ttg Leu	acc Thr 5	GIn	tct Ser	cca Pro	tct Ser	tcc Ser 10	Val	tct Ser	gca Ala	tct Ser	gtg Val 15	gga Gly	48
gac Asp	aga Arg	gtc Val	acc Thr 20	ctc Leu	act Thr	tgt Cys	cgg Arg	gcg Ala 25	agt Ser	cag Gln	agt Ser	att Ile	aag Lys 30	agg Arg	tgg Trp	96
tta Leu	gcc Ala	tgg Trp 35	tat Tyr	cag Gln	cag Gln	aaa Lys	cca Pro 40	GJA aaa	aag Lys	gcc Ala	cct Pro	agg Arg 45	ctc Leu	ctc Leu	atc Ile	144
tat Tyr	gct Ala 50	gca Ala	tcc Ser	act Thr	ttg Leu	caa Gln 55	agt Ser	gly aaa	gtc Val	cca Pro	tca Ser 60	agg Arg	ttc Phe	agc Ser	ggc Gly	192
ggt Gly 65	gga Gly	tct Ser	gjà aaa	aca Thr	gat Asp 70	ttc Phe	act Thr	ctc Leu	acc Thr	atc Ile 75	aac Asn	agc Ser	ctg Leu	cag Gln	cct Pro 80	240
gaa Glu	gat Asp	ttt Phe	gca Ala	att Ile 85	tac Tyr	tac Tyr	tgt Cys	caa Gln	cag Gln 90	gct Ala	aac Asn	agt Ser	ttc Phe	cct Pro 95	ccc Pro	288
act Thr	ttc Phe	ggc Gly	cct Pro 100	gjà aaa	acc Thr	aaa Lys	gtg Val	gat Asp 105	atc Ile	aaa Lys						321

<210> 97

<211> 107

<212> PRT

<213> Human

<400> 97

Asp Ile Glu Leu Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly
5 10 15

Asp Arg Val Thr Leu Thr Cys Arg Ala Ser Gln Ser Ile Lys Arg Trp

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Arg Leu Leu Ile 35 40 45

Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly 50 55 60

Gly Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro 65 70 75 80

Glu Asp Phe Ala Ile Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro Pro 85 90 95

Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys

<210> 98

<211> 333

<212> DNA

cag Gln	tct Ser	gtc Val	gtg Val	acg Thr 5	cag Gln	ccg Pro	ccc Pro	tca Ser	gtg Val 10	tct Ser	Gly 999	gcc Ala	cca Pro	999 Gly 15	Gln	48
agg Arg	gtc Val	acc Thr	atc Ile 20	tcc Ser	tgc Cys	agt Ser	Gly 999	agc Ser 25	agg Arg	tcc Ser	aac Asn	atc Ile	999 30	gca Ala	cac His	96
tat Tyr	gaa Glu	gtc Val 35	cag Gln	tgg Trp	tac Tyr	cag Gln	cag Gln 40	ttt Phe	ccg Pro	gga Gly	gca Ala	gcc Ala 45	ccc Pro	aaa Lys	ctc Leu	144
ctc Leu	atc Ile 50	tat Tyr	ggt Gly	gac Asp	acc Thr	aat Asn 55	cgg Arg	ccc Pro	tca Ser	gly ggg	gtc Val 60	cct Pro	gac Asp	cga Arg	ttc Phe	192
tct Ser 65	gcc Ala	tcc Ser	cac His	tct Ser	ggc Gly 70	acc Thr	tca Ser	gcc Ala	tcc Ser	ctt Leu 75	gcc Ala	atc Ile	aca Thr	gly aaa	ctc Leu 80	240
cag Gln	gct Ala	gag Glu	gat Asp	gag Glu 85	gct Ala	gat Asp	tat Tyr	tac Tyr	tgc Cys 90	cag Gln	tcg Ser	tat Tyr	gac Asp	acc Thr 95	agt Ser	288
cta Leu	cgt Arg	ggt Gly	ccg Pro 100	gtg Val	ttc Phe	ggc	gga Gly	999 Gly 105	acc Thr	aag Lys	ctg Leu	acc Thr	gtc Val 110	cta Leu		333

<210> 99

<211> 111

<212> PRT

<213> Human

<400> 99

Gln Ser Val Val Thr Gln Pro Pro Ser Val Ser Gly Ala Pro Gly Gln 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Arg Ser Asn Ile Gly Ala His

Tyr Glu Val Gln Trp Tyr Gln Gln Phe Pro Gly Ala Ala Pro Lys Leu 35 40 45

Leu Ile Tyr Gly Asp Thr Asn Arg Pro Ser Gly Val Pro Asp Arg Phe
50 55 60

Ser Ala Ser His Ser Gly Thr Ser Ala Ser Leu Ala Ile Thr Gly Leu 65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Thr Ser 85 90 95

Leu Arg Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 100

<211> 333

<212> DNA

cag Gln	tct Ser	gtc Val	gtg Val	acg Thr 5	GIn	ccg Pro	ccc Pro	tca Ser	gtg Val 10	tct Ser	gl ^y aaa	gcc Ala	cca Pro	999 Gly 15	cag Gln	48
agg Arg	gtc Val	acc Thr	atc Ile 20	tcc Ser	tgc Cys	act Thr	gly aaa	agc Ser 25	agc Ser	tcc Ser	aac Asn	atc Ile	30 Gly ggg	aca Thr	ggt Gly	96
tat Tyr	gat Asp	gta Val 35	cat His	tgg Trp	tac Tyr	cag Gln	cag Gln 40	gtt Val	cca Pro	gga Gly	tca Ser	gcc Ala 45	ccc Pro	aaa Lys	ctc Leu	144
ctc Leu	atc Ile 50	tat Tyr	gct Ala	tac Tyr	acc Thr	aat Asn 55	cgg Arg	ccc Pro	tca Ser	G1y 999	gtc Val 60	cct Pro	gac Asp	cga Arg	ttc Phe	192
tct Ser 65	ggc ggc	tcc Ser	aag Lys	tct Ser	ggc Gly 70	atg Met	tca Ser	gcc Ala	tcc Ser	ctg Leu 75	gtc Val	atc Ile	ggt Gly	ggt Gly	ctc Leu 80	240
cag Gln	gct Ala	gag Glu	gat Asp	gag Glu 85	gct Ala	gat Asp	tat Tyr	tac Tyr	tgc Cys 90	cag Gln	tcc Ser	ttt Phe	gac Asp	gac Asp 95	agc Ser	288
ctg Leu	aat Asn	ggt Gly	ctt Leu 100	gtc Val	ttc Phe	gga Gly	cct Pro	999 Gly 105	acc Thr	tcg Ser	gtc Val	acc Thr	gtc Val 110	ctc Leu		333

<210> 101

<211> 111

<212> PRT

<213> Human

<400> 101

Gln Ser Val Val Thr Gln Pro Pro Ser Val Ser Gly Ala Pro Gly Gln 5 10 15

Arg Val Thr Ile Ser Cys Thr Gly Ser Ser Ser Asn Ile Gly Thr Gly
20 25 30

Tyr Asp Val His Trp Tyr Gln Gln Val Pro Gly Ser Ala Pro Lys Leu 35 40 45

Leu Ile Tyr Ala Tyr Thr Asn Arg Pro Ser Gly Val Pro Asp Arg Phe
50 55 60

Ser Gly Ser Lys Ser Gly Met Ser Ala Ser Leu Val Ile Gly Gly Leu 65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Phe Asp Asp Ser 85 90 95

Leu Asn Gly Leu Val Phe Gly Pro Gly Thr Ser Val Thr Val Leu 100 105 110

<210> 102

<211> 333

<212> DNA

,, <400> 102

cag Gln	tct Ser	gtg Val	ttg Leu	acg Thr 5	cag Gln	ccg Pro	ccc Pro	tca Ser	gtg Val 10	tct Ser	gly aaa	gcc Ala	cca Pro	999 Gly 15	cag Gln	48
agg Arg	gtc Val	acc Thr	atc Ile 20	tcc Ser	tgc Cys	act Thr	gly 999	agc Ser 25	cac His	tcc Ser	aac Asn	ttc Phe	30 Gly 39	gca Ala	ggt Gly	96
act Thr	gat Asp	gtc Val 35	cat His	tgg Trp	tac Tyr	caa Gln	cac His 40	ctt Leu	cca Pro	gga Gly	aca Thr	gcc Ala 45	ccc Pro	aga Arg	ctc Leu	144
ctc Leu	att Ile 50	cat His	gga Gly	gac Asp	act Thr	cat His 55	cgg Arg	ccc Pro	tcc Ser	gjà aaa	gtc Val 60	gct Ala	gac Asp	cga Arg	ttc Phe	192
tct Ser 65	ggc Gly	tcc Ser	agg Arg	tct Ser	ggc Gly 70	gcc Ala	tca Ser	gcc Ala	tcc Ser	ctg Leu 75	gcc Ala	atc Ile	act Thr	gly 999	ctc Leu 80	240
cgg Arg	gtt Val	gag Glu	gat Asp	gag Glu 85	gct Ala	gat Asp	tat Tyr	tac Tyr	tgt Cys 90	cag Gln	tcg Ser	tat Tyr	gac Asp	tat Tyr 95	ggc Gly	288
ctg Leu	aga Arg	ggt Gly	tgg Trp 100	gtg Val	ttc Phe	ggc Gly	GIY	999 Gly 105	acc Thr	aag Lys	ctg Leu	acc Thr	gtc Val 110	ctt Leu		333

<210> 103

<211> 111

<212> PRT

<213> Human

<400> 103

Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Gly Ala Pro Gly Gln 5 10 15

Arg Val Thr Ile Ser Cys Thr Gly Ser His Ser Asn Phe Gly Ala Gly 20 25 30

Thr Asp Val His Trp Tyr Gln His Leu Pro Gly Thr Ala Pro Arg Leu 35 40 45

Leu Ile His Gly Asp Thr His Arg Pro Ser Gly Val Ala Asp Arg Phe
50 55 60

Ser Gly Ser Arg Ser Gly Ala Ser Ala Ser Leu Ala Ile Thr Gly Leu 65 70 75 80

Arg Val Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Tyr Gly
85 90 95

Leu Arg Gly Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 104

<211> 321

<212> DNA

gac Asp	atc Ile	cag Gln	atg Met	acc Thr 5	GIn	tct Ser	cca Pro	tct Ser	tcc Ser 10	gtg Val	tct Ser	gca Ala	tct Ser	ata Ile 15	gga Gly	48
gac Asp	aga Arg	gtc Val	acc Thr 20	atc Ile	act Thr	tgt Cys	cgg Arg	gcg Ala 25	agt Ser	cag Gln	ggt Gly	att Ile	gac Asp 30	aac Asn	tgg Trp	96
tta Leu	ggc Gly	tgg Trp 35	tat Tyr	cag Gln	cag Gln	aaa Lys	cct Pro 40	Gly 333	aaa Lys	gcc Ala	cct Pro	aaa Lys 45	ctc Leu	ctg Leu	atc Ile	144
tac Tyr	gat Asp 50	gca Ala	tcc Ser	aat Asn	ttg Leu	gac Asp 55	aca Thr	gjà aaa	gtc Val	cca Pro	tca Ser 60	agg Arg _.	ttc Phe	agt Ser	gga Gly	192
agt Ser 65	gga Gly	tct Ser	Gly aaa	aca Thr	tat Tyr 70	ttt Phe	act Thr	ctc Leu	acc Thr	atc Ile 75	agt Ser	agc Ser	ctg Leu	caa Gln	gct Ala 80	240
gaa Glu	gat Asp	ttt Phe	gca Ala	gtt Val 85	tat Tyr	ttc Phe	tgt Cys	caa Gln	cag Gln 90	gct Ala	aaa Lys	gct Ala	ttt Phe	cct Pro 95	ccc Pro	288
act Thr	ttc Phe	ggc Gly	gga Gly 100	gjå aaa	acc Thr	aag Lys	gtg Val	gac Asp 105	atc Ile	aaa Lys						321

<210> 105

<211> 107

<212> PRT

<213> Human

<400> 105

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Ile Gly 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Asp Asn Trp 20 25 30

Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile 35 40 45

Tyr Asp Ala Ser Asn Leu Asp Thr Gly Val Pro Ser Arg Phe Ser Gly 50 60

Ser Gly Ser Gly Thr Tyr Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala 65 70 75 80

Glu Asp Phe Ala Val Tyr Phe Cys Gln Gln Ala Lys Ala Phe Pro Pro 85 90 95

Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys

<210> 106

<211> 13

<212> PRT

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Thr Gly Ser His Ser Asn Phe Gly Ala Gly Thr Asp Val

<210> 107

<211> 7

<212> PRT

<213> Human

<400> 107

Gly Asp Ser Asn Arg Pro Ser

<210> 108

<211> 11

<212> PRT

<213> Human

<400> 108

Gln Ser Tyr Asp Tyr Gly Leu Arg Gly Trp Val 5

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<211> 11

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Arg Ala Ser Gln Asn Ile Asn Asn Tyr Leu Asn

<210> 110

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Ala Ala Ser Thr Leu Gln Ser .

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Gln Gln Tyr Ser Arg Tyr Pro Pro Thr

<210> 112

<211> 14

<212> PRT

Thr Gly Ser Ser Thr Asp Val Gly Asn Tyr Asn Tyr Ile Ser 5 10

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<212> PRT

<213> Human

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<210> 114

<211> 10

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<213> Human

<400> 114

Asn Ser Tyr Ser Ala Thr Asp Thr Leu Val

<210> 115

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Thr Gly Gln Ser Ser Asn Ile Gly Ala Asp Tyr Asp Val His

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<211> 7

<212> PRT

<213> Human

<400> 116

Gly His Asn Asn Arg Pro Ser

<210> 117

<211> 11

<212> PRT

<213> Human

<400> 117

Gln Ser Tyr Asp Ser Ser Leu Ser Gly Leu Val

<210> 118

<211> 11

<212> PRT

Arg Ala Ser Gln Asp Ile Ser Ser Trp Leu Ala

<210> 119

<211> 7

<212> PRT

<213> Human

<400> 119

Ala Ala Ser Leu Leu Gln Ser

<210> 120

<211> 9

<212> PRT

<213> Human

<400> 120

Gln Gln Ala Asp Ser Phe Pro Pro Thr 5

<210> 121

<211> 11

<212> PRT

<213> Human

<400> 121

Arg Ala Ser Gln Ser Ile Lys Arg Trp Leu Ala 5

<210> 122

<211> 7

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<213> Human

<400> 122

Ala Ala Ser Thr Leu Gln Ser

<210> 123

<211> 9 <212> PRT

<213> Human

<400> 123

Gln Gln Ala Asn Ser Phe Pro Pro Thr

<210> 124

<211> 14

<212> PRT

Ser Gly Ser Arg Ser Asn Ile Gly Ala His Tyr Glu Val Gln 5 10

<210> 125

<211> 7

<212> PRT

<213> Human

<400> 125

Gly Asp Thr Asn Arg Pro Ser

<210> 126

<211> 11

<212> PRT

<213> Human

<400> 126

Gln Ser Tyr Asp Thr Ser Leu Arg Gly Pro Val

<210> 127

<211> 14

<212> PRT

<213> Human

<400> 127

Thr Gly Ser Ser Asn Ile Gly Thr Gly Tyr Asp Val His 5 10

<210> 128

<211> 7

<212> PRT

<213> Human

<400> 128

Ala Tyr Thr Asn Arg Pro Ser

<210> 129

<211> 11

<212> PRT

<213> Human

<400> 129

Gln Ser Phe Asp Asp Ser Leu Asn Gly Leu Val

<210> 130

<211> 14

<212> PRT

PCT/US2002/041372

<210> 136 <211> 2351

<212> DNA

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ctt Leu	caa Gln 50	Ile	act Thr	tgc Cys	agg Arg	gga Gly 55	Gln	agg Arg	gac Asp	ttg Leu	gac Asp 60	Trp	ctt Leu	tgg Trp	ccc Pro	251	
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gtc Val	att Ile	tat Tyr 115	gtc Val	tat Tyr	gtt Val	caa Gln	gat Asp 120	tac Tyr	aga Arg	tct Ser	cca Pro	ttt Phe 125	att Ile	gct Ala	tct Ser	443	
gtt Val	agt Ser 130	gac Asp	caa Gln	cat His	gga Gly	gtc Val 135	gtg Val	tac Tyr	att Ile	act Thr	gag Glu 140	aac Asn	aaa Lys	aac Asn	aaa Lys	491	
act Thr 145	gtg Val	gtg Val	att Ile	cca Pro	tgt Cys 150	ctc Leu	Gly aaa	tcc Ser	att Ile	tca Ser 155	aat Asn	ctc Leu	aac Asn	gtg Val	tca Ser 160	539	
ctt Leu	tgt Cys	gca Ala	aga Arg	tac Tyr 165	cca Pro	gaa Glu	aag Lys	aga Arg	ttt Phe 170	gtt Val	cct Pro	gat Asp	ggt Gly	aac Asn 175	aga Arg	587	
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agc Ser	tat Tyr	gct Ala 195	ggc	atg Met	gtc Val	ttc Phe	tgt Cys 200	gaa Glu	gca Ala	aaa Lys	att Ile	aat Asn 205	gat Asp	gaa Glu	agt Ser	683	
tac Tyr	cag Gln 210	tct Ser	att Ile	atg Met	tac Tyr	ata Ile 215	gtt Val	gtc Val	gtt Val	gta Val	999 Gly 220	tat Tyr	agg Arg	att Ile	tat Tyr	731	
gat Asp 225	gtg Val	gtt Val	ctg Leu	agt Ser	ccg Pro 230	tct Ser	cat His	gga Gly	Ile	gaa Glu 235	cta Leu	tct Ser	gtt Val	gga Gly	gaa Glu 240	779	
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500 ' 505 510

act Thi	gta Val	a agt l Sei 519	Thr	ctt Leu	gtt Val	ato Ile	caa Glr 520	ı Ala	g gca Ala	aat Asi	t gto n Val	g tca L Sei 525	: Ala	ttg Lei	g tac ı Tyr	1643
aaa Lys	tgt Cys 530	GIU	gcg Ala	gto Val	aac Asn	aaa Lys 535	Val	ggg Gly	aga Arg	gga Gly	a gag 7 Glu 540	ı Arg	g gto g Val	g ato	tcc Ser	1691
ttc Phe 545	His	gtç Val	acc Thr	agg Arg	ggt Gly 550	Pro	gaa Glu	att Ile	act Thr	tto Lev	ı Glm	cct Pro	gac Asp	ato Met	g cag Gln 560	1739
ccc Pro	act Thr	gag Glu	cag Gln	gag Glu 565	agc Ser	gtg Val	tct Ser	ttg Leu	tgg Trp 570	Суз	act Thr	gca Ala	gac Asp	aga Arg 575	tct Ser	1787
acg Thr	ttt Phe	gag Glu	aac Asn 580	ctc Leu	aca Thr	tgg Trp	tac Tyr	aag Lys 585	ctt Leu	gly	cca Pro	cag Gln	cct Pro 590	Leu	cca Pro	1835
atc Ile	cat His	gtg Val 595	gga Gly	gag Glu	ttg Leu	ccc Pro	aca Thr 600	cct Pro	gtt Val	tgc Cys	aag Lys	aac Asn 605	ttg Leu	gat Asp	act Thr	1883
ctt Leu	tgg Trp 610	aaa Lys	ttg Leu	aat Asn	gcc Ala	acc Thr 615	atg Met	ttc Phe	tct Ser	aat Asn	agc Ser 620	aca Thr	aat Asn	gac Asp	att Ile	1931
ttg Leu 625	atc Ile	atg Met	gag Glu	ctt Leu	aag Lys 630	aat Asn	gca Ala	tcc Ser	ttg Leu	cag Gln 635	gac Asp	caa Gln	gga Gly	gac Asp	tat Tyr 640	1979
gtc Val	tgc Cys	ctt Leu	gct Ala	caa Gln 645	gac Asp	agg Arg	aag Lys	acc Thr	aag Lys 650	aaa Lys	aga Arg	cat His	tgc Cys	gtg Val 655	gtc Val	2027
agg Arg	cag Gln	ctc Leu	aca Thr 660	gtc Val	cta Leu	gag Glu	cgt Arg	gtg Val 665	gca Ala	ccc Pro	acg Thr	atc Ile	aca Thr 670	gga Gly	aac Asn	2075
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Leu Gln Ile Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro 50 55 60

Asn Asn Gln Ser Gly Ser Glu Gln Arg Val Glu Val Thr Glu Cys Ser 65 70 75 80

Asp Gly Leu Phe Cys Lys Thr Leu Thr Ile Pro Lys Val Ile Gly Asn 85 90 95

Asp Thr Gly Ala Tyr Lys Cys Phe Tyr Arg Glu Thr Asp Leu Ala Ser 100 105 110

Val Ile Tyr Val Tyr Val Gln Asp Tyr Arg Ser Pro Phe Ile Ala Ser 115 120 125

Val Ser Asp Gln His Gly Val Val Tyr Ile Thr Glu Asn Lys Asn Lys 130 135 140

Thr Val Val Ile Pro Cys Leu Gly Ser Ile Ser Asn Leu Asn Val Ser 145 150 155 160

Leu Cys Ala Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly Asn Arg 165 170 175

Ile Ser Trp Asp Ser Lys Lys Gly Phe Thr Ile Pro Ser Tyr Met Ile 180 185 190

Ser Tyr Ala Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp Glu Ser 195 200 205

Tyr Gln Ser Ile Met Tyr Ile Val Val Val Gly Tyr Arg Ile Tyr 210 215 220

Asp Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu 225 230 235 240

Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile 245 250 255

Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu 260 265 270

Val Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe 275 280 285

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Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr 305 310 315 320

Phe Val Arg Val His Glu Lys Pro Phe Val Ala Phe Gly Ser Gly Met 325 330 335

Glu Ser Leu Val Glu Ala Thr Val Gly Glu Arg Val Arg Ile Pro Ala 340 345 350

Lys Tyr Leu Gly Tyr Pro Pro Pro Glu Ile Lys Trp Tyr Lys Asn Gly 355 360 365

Ile Pro Leu Glu Ser Asn His Thr Ile Lys Ala Gly His Val Leu Thr 370 380

Ile Met Glu Val Ser Glu Arg Asp Thr Gly Asn Tyr Thr Val Ile Leu 385 390 395 400

Thr Asn Pro Ile Ser Lys Glu Lys Gln Ser His Val Val Ser Leu Val
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Asp Ser Tyr Gln Tyr Gly Thr Thr Gln Thr Leu Thr Cys Thr Val Tyr 435 440 445

Ala Ile Pro Pro Pro His His Ile His Trp Tyr Trp Gln Leu Glu Glu 450 455 460

Glu Cys Ala Asn Glu Pro Ser His Ala Val Ser Val Thr Asn Pro Tyr 465 470 475 480

Pro Cys Glu Glu Trp Arg Ser Val Glu Asp Phe Gln Gly Gly Asn Lys 485 490 495

Ile Glu Val Asn Lys Asn Gln Phe Ala Leu Ile Glu Gly Lys Asn Lys 500 505 510

Thr Val Ser Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr 515 520 525

Lys Cys Glu Ala Val Asn Lys Val Gly Arg Gly Glu Arg Val Ile Ser 530 540

Phe His Val Thr Arg Gly Pro Glu Ile Thr Leu Gln Pro Asp Met Gln 545 550 555 560

Pro Thr Glu Gln Glu Ser Val Ser Leu Trp Cys Thr Ala Asp Arg Ser 565 570 575

Thr Phe Glu Asn Leu Thr Trp Tyr Lys Leu Gly Pro Gln Pro Leu Pro 580 585 590

Ile His Val Gly Glu Leu Pro Thr Pro Val Cys Lys Asn Leu Asp Thr 595 600 605

Leu Trp Lys Leu Asn Ala Thr Met Phe Ser Asn Ser Thr Asn Asp Ile 610 615 620

Leu Ile Met Glu Leu Lys Asn Ala Ser Leu Gln Asp Gln Gly Asp Tyr 625 630 635 640

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- Thr Ala Ser Gly Asn Pro Pro Pro Gln Ile Met Trp Phe Lys Asp Asn 690 695 700
- Glu Thr Leu Val Glu Asp Ser Gly Ile Val Leu Lys Asp Gly Asn Arg
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- Asn Leu Thr Ile Arg Arg Val Arg Lys Glu Asp Glu Gly Leu Tyr Thr 725 730 735
- Cys Gln Ala Cys Ser Val Leu Gly Cys Ala Lys Val Glu Ala Phe Phe 740 745 750
- Ile Ile Glu Gly Ala Gln Glu Lys Thr Asn Leu Glu
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